



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/784,160

02/24/2004

Tsuneaki Kondoh

249206US3

8288

22850

7590

11/16/2006

C. IRVIN MCCLELLAND
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

ZACHARIA, RAMSEY E

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/784,160

Applicant(s)

KONDOH ET AL.

Examiner

Ramsey Zacharia

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10 and 12-18 is/are pending in the application.
- 4a) Of the above claim(s) 10 and 12-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 05/24/2006.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 20 July 2006 has been entered.

Information Disclosure Statement

3. The first reference in the IDS filed 24 May 2006 has been lined through because it is the present application and therefore does not belong on an IDS.

Claim Rejections - 35 USC § 103

4. Claims 1, 3, 4 and 9 are rejected under 35 U.S.C. 103(a) as obvious over Fukunaga et al. (US 5,819,646) in view of Kobaru et al. (US 2001/0026717 A1) as evidenced by Hobson et al. (US 5,744,241).

Fukunaga et al. teach a pressing roll comprising a core, an elastic layer, and fluorocarbon layer (column 2, lines 35-45). The fluorocarbon layer may contain various fillers such as metal

Art Unit: 1773

(column 4, lines 2-5). In the embodiment of Example 1, the elastic layer comprised a silicone rubber and the fluorocarbon layer comprised FURON resin manufactured by Bunnell Plastics Division, a PFA resin (column 6, lines 18-41). Hobson et al. demonstrate that the FURON from Bunnell Plastics Division has an axial tensile strength of 6258 psi (column 14, lines 32-56), which corresponds to about 43 MPa.

Fukunaga et al. do not teach baking the fluorocarbon layer on the elastic layer at a temperature lower than an oxidation starting temperature of the silicone. However, this is a product-by-process type limitation. When the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claim in a product-by-process claim, the burden is on the applicant to present evidence from which the examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. *In re Brown*, 459 F. 2d 531, 173 USPQ 685 (CCPA 1972); *In re Fessman*, 489 F. 2d 742, 180 USPQ 324 (CCPA 1974). This burden is NOT discharged solely because the product was derived from a process not known to the prior art. *In re Fessman*, 489 F. 2d 742, 180 USPQ 324 (CCPA 1974). Furthermore, the determination of patentability for a product-by-process claim is based on the product itself and not on the method of production. If the product in the product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985) and MPEP § 2113. It appears from the instant specification that the tensile strength of PFA copolymer is a function of the ratio of comonomer and not the temperature at which it is baked (see page 9, lines 19-22). Because a 2 mil thick film of the FURON resin used by Fukunaga et al. has a tensile strength of about 43 MPa, a film that is 60% thinner (i.e. 1.2 mil

Art Unit: 1773

or 30 μm) would be expected to have a tensile strength that is 60% less, i.e. about 26 MPa.

Moreover, because the silicone layer of Example 1 in Fukunaga et al. was cured at significantly less than 340 $^{\circ}\text{C}$, it would not be expected to undergo oxidation. As such, the resulting fixing device of Fukunaga et al. appears to be the same as that of instant claim 1 and the burden is on the applicants to conclusively demonstrate a difference in the claimed product.

Fukunaga et al. do not teach that the core of the pressing roll surrounds an aperture configured to receive a heater.

Kobaru et al. is directed to a fixing apparatus for use in an image forming apparatus (paragraph 0002). The device comprises a pressurizing roller comprising a core, a silicone rubber layer, and an outer fluororesin layer wherein the core is hollow and configured to receive a heater (paragraph 0044). By providing a heater within the pressurizing roller, adhesion of toner to the roller can be prevented (paragraph 0061).

One skilled in the art would be motivated to provide a heater within the pressure roll of Fukunaga et al. to prevent the adhesion of toner to the pressure roll.

Claim Rejections - 35 USC § 103

5. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga et al. (US 5,819,646) in view of Kobaru et al. (US 2001/0026717 A1) as applied to claim 4 above, and further in view of Suzuki et al. (US 4,796,046).

Fukunaga et al. taken in view of Kobaru et al. teach all the limitations of claims 5 and 6, as outlined above, except for the presence of 1-5 mass% of carbon filler. However, Fukunaga et

Art Unit: 1773

al. do teach that their fluorocarbon layer may be made electrically conductive (column 3, line 67-column 4, line 1).

Suzuki et al. teach that adding 1-10 wt% of a filler, such as carbon black, to a fluoropolymer layer of a fuser members results in an electrically conductive layer without impairing the releasability of the coating layer to toner images. (column 6, lines 7-19).

One skilled in the art would be motivated to make the fluorocarbon layer of Fukunaga et al. electrically conductive by adding 1-10 wt% of carbon black so that the resulting layer will be electrically conductive without impairing its releasability to toner images.

6. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga et al. (US 5,819,646) in view of Kobaru et al. (US 2001/0026717 A1) as applied to claim 1 above, and further in view of Ream et al. (US 6,284,373).

Fukunaga et al. taken in view of Kobaru et al. teach all the limitations of claims 7 and 8, as outlined above, except for the material for the core of the fixing member.

Ream et al. disclose that cores of fusing members are typically metal rolls or polyimide belts (column 1, lines 55-67). Suitable metals include aluminum, stainless steel, and copper alloys (column 4, lines 9-13).

Ream et al. disclose that polyimide belts and aluminum or stainless steel rolls are known in the art as suitable cores for fuser members. Therefore, it would be obvious to one skilled in the art to use one of these known cores as the core in the fixing member of Fukunaga et al. because the selection of a known material based on its suitability for its intended use supports a *prima facie* obviousness determination. See MPEP 2144.07.

Response to Arguments


7. Applicant's arguments with respect to claims 1 and 3-9 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached at (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ramsey Zacharia
Primary Examiner
Tech Center 1700